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ABSTRACT

In this review of literature and research on homework, the author presents historical trends in attitudes by educators toward the role and effectiveness of homework. Definitions and categories of homework are provided, including a summary of widely cited professional opinions regarding its advantages and disadvantages. The results of major surveys conducted to determine existing attitudes and practices regarding homework are summarized. The author provides a synthesis of experimental findings regarding the effect of homework on academic achievement and the relationship between homework and the attitudes of students toward academic subjects. Suggestions for the development of homework policies by schools are included. (JEH)

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A SYNTHESIS OF HOMEWORK RESEARCH

AND

RELATED LITERATURE

EA 013 466

Presented to the Lehigh Chapter of Phi Delta Kappa,
Bethlehem, Pennsylvania on January 24, 1981

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INTRODUCTION

What do we really know about homework? Is homework merely an unmovable institution in American education irrationally defended for convenience or tradition's sake? Do we have sufficient research data to validate this widespread practice? Are educators ready and able to set criteria for effective homework practices, or must the question of homework remain an individual struggle for teachers, schools, or school districts?

In an effort to answer some of these questions, a review of available literature was conducted. The review was limited to articles published from 1964 to present. Much of the literature written previous to 1964 was summarized in a number of these more recent articles. Using Disseration Abstracts, Educational Index and the ERIC System, seventy-three articles were identified. Of these, forty-seven were accessible and were reviewed. No full texts on homework were identified.

SYNTHESIS OF THE LITERATURE

Historical Trends in Attitudes Toward Homework

There is evidence that homework has been a controversial issue since at least the turn of the century. Approximately 500 articles on homework have been indexed since 1900.

Yet, in the absence of a sound research base, homework practices have been the children of popularized notions loosely tied to changing educational philosophies and theories at best and of indiscriminate and arbitrary decisions at worst.

In the first part of this century, a widely accepted theory of learning presented the mind as a kind of a big muscle that needed development. Memorization was stressed in school as exercise for the mind, and homework was considered important in disciplining the mind. Difficult and disagreeable assignments were justified on this basis.

Shortly, this theory was disproven, and educators and parents began to question homework. Some educators related the ideas of theorists such as Pestalozzi and Herbart to homework and began to

consider student interest as an important factor. They began to see that the teacher's ability to create interest in homework was important. In 1926, an article by Good appeared in the Elementary School Journal stating, "There should be no compulsory home tasks assigned in the lower grades, and there may be serious doubts as to the wisdom of requiring homework in any of the grades of the elementary school . . . the reasonable plan being to have such work done voluntarily, following the inclination of the child." (Check, 1966)

Advocacy for discontinuance of homework prevailed in the 1940's.

During the 1950's, there was less concern about the continuance of homework as about the learning emphasis that was still extant. A new emphasis on activity and on student initiative and responsibility in the effective use of out of school time began to change homework practices.

Then came Sputnik in 1957. Suddenly, there was a trend back toward more homework and toward more subject matter emphasis in homework. At about the same time, colleges and universities were raising entrance standards and the big push for "academic excellence" measured by higher grade point averages was on. Homework was viewed as a means to that end. (Check, 1966; Wildman, 1968; Nea, 1975)

In 1960, the Educational Policy Commission of the National Education Association listed homework as one of ten contemporary issues in education. There was a trend in the early sixties toward more and more homework. (Hedges, 1964) This move was strengthened by the fact that what meager research was available at the time seemed to indicate a positive relationship between homework and academic achievement.

The frenzy began to subside in the mid-sixties when some of the affects of too much pressure on students became evident to some. Though administrators, teachers, and parents remained generally in favor of homework, they began to question again the amount and kinds of homework given. Some educators now questioned whether current homework practices made any sense in light of what was known about learning theory. Some educators began to consider that there may be alternatives to homework such as guided study in school. Most importantly, the mental health aspects of homework practices were receiving more attention and the American Educational Research Association took a stand (Wildman, 1968):

> For mental health, children and young people need to engage in worthwhile out-of-school tasks suited to their individual capacities. Homework should supply such tasks and reasonable freedom in carrying them out. Whenever homework crowds out social experience, outdoor recreation, and creative activities, and whenever it usurps time devoted to sleep, it is not meeting the basic needs of children and adolescents.

During the late sixties and early seventies, the pressure on students for academic achievement in terms of grades generally receded. Educators were focused more on such things as social adjustment and emotional development of students. Affective education emerged in the 1970's. Research focused on attitudes as well as achievement.

As all things go, we have come full circle. In the decade to which we have recently bid adieu came reports of declining test scores, poor academic achievement, high illiteracy in our nation's cities, and a lowering of standards by educational institutions. Whether or not these claims were defensible, we were greeted by a "back to basics" movement. Once again, despite insufficient research evidence supporting that an increase in homework results in greater achievement, there has been a clamor by parents and others for more homework. Educators responded. (Lee and Pruitt, 1979)

As we enter a period of reaction to "back to basics", what will be the effect on homework?

What in the 80's?

Defining Homework

Amazingly, only two of the forty-seven articles offered a definition of homework. There are many descriptions of types and uses of homework but evidently no commonly accepted definition.

Bond and Smith (1966) defined homework as follows:

> In its usual application, homework refers to tasks that the child is assigned to do on his own time, after school hours, as an extension of his classroom work. It is usually distinct from the multitude of extracurricular activities or intellectually stimulating activities undertaken voluntarily by students.

Maertens (1968) defines arithmetic homework as "arithmetic material which has been consciously assigned to be completed outside regular school hours".

Beyond this, Littledale (1969) pointed out the lack of a commonly accepted definition and Liebert (1969) noted that high school students enrolled in a reading course, when surveyed, tended to define homework in terms of a review of classwork.

In short, it appears that educators have no commonly accepted definition of homework nor any universally accepted constructs by which to view and study the nature of homework. Furthermore, there

appears to be a serious division in what homework is conceived to be in that many educators view homework as a separate entity while many others view it as part of the larger entity of study, guided or independent, taking place in school or out.

Kinds of Homework Identified

There have been numerous attempts to categorize kinds and uses of homework.

The Encyclopedia of Educational Research, 4th Edition, distinguishes between "teacher-dominated assignments" and assignments resulting from joint planning by both the teacher and the students. It also distinguishes between guided study, where the teacher is available to guide the study activity, and independent study, when the student's inquiry is self-directed and the teacher remains in the background.

A report by the Research Division, National Education Association (NEA), describes five kinds of homework: 1) reading homework, 2) written homework, 3) drill, 4) long-term projects, and 5) individualized homework.

A later report by the Association of Classroom Teachers, NEA, suggests arranging homework assignments on a continuum "from the

extreme mechanical, routine exercises required of all students to the other extreme of creative projects or experiments undertaken voluntarily."

NEA's 1975 report, What Research Says to the Teacher: Homework, reiterates this, though it certainly gives no thorough analysis of what might lie along the continuum. Instead, the article merely makes mention of "exercises done mechanically", assignments requiring "research type reading", assignments calling for "initiative, imagination, and individual effort", "independent study projects", "creative assignments", "written work", and "discussion". The report also makes mention of student participation in the detailed planning of assignments.

Maertens and Johnston (1972) studied homework for which there was "planned parental involvement" and feedback and Singh investigated "individualized enrichment homework".

Austin also discussed feedback, in this case written feedback, on arithmetic papers as an element of homework.

Lee and Pruitt (1979) suggests a taxonomy of homework assignments classed by purpose:

Practice	The most common and simple type of assignment, this is given to help students master specific skills. Practice exercises should be limited to material presented in class.

Preparation	Preparation assignments are given to prepare students to gain maximum benefit from subsequent lessons.
Extension	Extension assignments are given to determine if the student can transfer a new skill or concept to a new situation. Extension assignments differ from practice assignments in the degree of application and abstract thinking required. Practice assignments require very little abstract thinking.
Creative	Creative assignments require students to integrate many skills and concepts in the process of producing a response. Creative assignments normally take more time to complete (from several days to weeks) than the other three types. Book reports and research projects are examples of this type of assignment.

O'Neill (1978) describes her use of three types of assignments with gifted children: (1) group projects, (2) theme projects, and (3) independent projects.

Boze (1967) places homework into two kinds of categories: assigned or voluntary and overnight or long-range.

Finally, Shell's (1979) discussion of homework assignments in beginning shorthand brings to light the question of whether generalizations concerning types of homework assignments can be appropriately made across disciplines or whether the nature of homework might by necessity vary among disciplines.

Once again, the lack of any universally accepted taxonomy or constructs concerning homework appears to seriously limit the extent to which any research findings or field practices can be meaningfully compared.

Opinions Regarding the Advantages and Disadvantages of Homework

Despite the lack of clarity in defining and categorizing homework, and the inconclusiveness of research on homework, the literature abounds with opinions regarding the apparent but unproven advantages and disadvantages of homework. Many of these are summarized on the following pages. Obviously, homework is an issue that evokes strong opinions and feelings.

Advantages

1. FURTHERS LEARNING TASKS THROUGH REINFORCEMENT, ASSIMILATION, PRACTICE, AND APPLICATION.
2. ALLOWS FOR COMPLETION OF UNFINISHED ASSIGNMENTS AND MAKE-UP WORK.
3. PROVIDES A PREVIEW OF CLASSROOM WORK.
4. ALLOWS TEACHERS TO ADJUST CLASSROOM INSTRUCTION TO INDIVIDUAL DIFFERENCES.
5. SUPPLEMENTAL HOME PROJECTS SUPPORT SCHOOL EXPERIENCE.
6. ENHANCES AND ENRICHES THE LEARNING PROCESS.
7. DEVELOPS INITIATIVE, SELF-DISCIPLINE, RESPONSIBILITY, AND INDEPENDENCE.
8. DEVELOPS INDEPENDENT STUDY SKILLS AND WORK HABITS.
9. CREATES PERMANENT LEISURE INTERESTS.
10. RELATES SCHOOL LEARNING TO PROBLEMS IN HOME, COMMUNITY, AND NATION.
11. ENCOURAGES EXPLORATION OF THE VOCATIONAL WORLD.
12. UTILIZES THE SENSE OF CIVIC RESPONSIBILITY.
13. DEVELOPS HABITS DURING CHILDHOOD AND YOUTH OF DEVOTING PART OF ONE'S HOME LIFE TO FAIRLY SYSTEMATIC AND COORDINATED INTELLECTUAL ACTIVITY.
14. ENRICHES SCHOOL EXPERIENCE.
15. AQUAINTS PARENTS WITH WHAT THE CHILD IS LEARNING AND INVITES THEIR HELP.
16. CAN BE REWARDING AND FUN.
17. ALLOWS FOR ASSIGNMENTS THAT REQUIRE THINKING WHICH CANNOT BE DONE IN THE REGULAR SCHOOL DAY.
18. CREATES A CLOSER BOND BETWEEN HOME AND SCHOOL.
19. TEACHES THE CHILD TO FOLLOW DIRECTIONS AND ORGANIZE TIME.

Advantages

20. IS A BUILDER OF CHARACTER.

21. PROVIDES FOR CONSTRUCTIVE USE OF TIME AND KEEPS THE CHILD OUT OF MISCHIEF.

22. THE AMOUNT OF KNOWLEDGE REQUIRED BY THE CURRICULUM CANNOT BE IMPARTED DURING SCHOOL HOURS ALONE.

23. PROVIDES CHALLENGE FOR FASTER STUDENTS.

24. HELPS THE SLOW STUDENT.

25. PROVIDES FOR SELF-ANALYSIS.

26. DEVELOPS APPRECIATION.

27. SOME HOMEWORK IS NECESSARY.

28. PARENT INVOLVEMENT IS A KEY TO THE EDUCATION OF GIFTED CHILDREN.

29. STUDENTS WHO DO THEIR HOMEWORK ACHIEVE MORE AND FASTER.

Advantages

	Hedges (1964)	Epps (1966)	Punke (1966)	Boze (1967)	Boyer (1968)	Strang (1968)	Wildman (1968)	PDE* (1971)	Green (1972)	Johnson (1972)	NEA (1975)	O'Neill (1978)	Shell (1979)
#1	X	X		X	X	X	X	X			X		
#2		X			X		X	X					
#3		X		X			X	X					
#4		X					X	X					
#5		X					X	X		X	X		
#6		X						X					
#7	X	X				X	X	X			X		
#8	X	X		X				X	X				
#9		X				X		X			X		
#10		X						X		X			
#11			X										
#12			X										
#13			X										
#14						X							
#15	X					X					X		

Advantages

	Hedges (1964)	Punke (1966)	Boyer (1968)	Wildman (1968)	Green (1972)	NEA (1975)	Shell (1979)
	Epps (1966)	Boze (1967)	Strang (1968)	PDE* (1971)	Johnson (1972)	O'Neill (1978)	
#16					X		
#17						X	
#18	X						
#19	X						
#20	X						
#21	X						
#22	X		X				X
#23			X				
#24			X				
#25			X				
#26			X				
#27						X	
#28							X
#29							X

*PDE Bureau of Curriculum Development and Evaluation

Disadvantages

1. LEAVES LITTLE TIME FOR STUDENTS TO PURSUE INTERESTS, PLAY, PURSUE CREATIVE ENDEAVORS, AND PARTICIPATE IN ORGANIZATIONAL AND RECREATIONAL ACTIVITIES.
2. REDUCES INTEREST IN AND ENTHUSIASM FOR SCHOOL.
3. PARENTS END UP DOING IT.
4. NOT ALL HOMES PROVIDE GOOD STUDY CONDITIONS.
5. GEARED TO THE AVERAGE.
6. DISRUPTS FAMILY LIFE AND CREATES EMOTIONAL TENSIONS.
7. CHANCES FOR LEARNING TO OCCUR ARE VERY SLIM IF REINFORCEMENT IS DELAYED OR IS NEVER FORTHCOMING.
8. THE SCHOOL USURPS THE ENTIRE DAY OF THE CHILD, INTERFERING WITH CULTURALIZATION BY HOME AND CHURCH.
9. CAUSES TENSION AND ANXIETY IN CHILDREN.
10. THE SCHOOL DAY IS LONG ENOUGH AND CHILDREN ARE TIRED.
11. DEVELOPMENT IN OTHER AREAS MAY BE STUNTED DUE TO EXCESSIVE HOMEWORK.
12. IT MAY BE USED AS PUNISHMENT BY THE TEACHER AND CONSIST OF MEANINGLESS TASKS.
13. OFTEN ILL-CHOSEN AND POORLY ASSIGNED.
14. LEADS TO POOR STUDY HABITS, COPYING, AND ASSORTED HOME AND SCHOOL DIFFICULTIES.
15. MAY LEAD TO CRAMPED LUNGS AND EYE STRAIN.
16. PARENTS CONFUSE THE CHILD AND ARE UNQUALIFIED TO SUPERVISE STUDY.
17. DISAGREEABLE TASKS ARE OFTEN ASSIGNED INSTEAD OF CREATIVE, INTERESTING ASSIGNMENTS.
18. IN SCHOOLS WHERE HOMEWORK HAS BEEN ABOLISHED, ACHIEVEMENT HAS NOT BEEN AFFECTED.
19. COURSES ARE BECOMING LIKE CORRESPONDENCE COURSES.

Disadvantages

	Hedges (1964)	Jones & Ross (1964)	Bond & Smith (1966)	Epps (1966)	Boze (1967)	Strang (1968)	Wildman (1968)	PDE* (1971)	NEA (1975)
#1	X			X				X	
#2	X			X			X	X	
#3	X			X			X	X	
#4	X			X		X	X	X	X
#5				X			X	X	
#6	X			X			X	X	
#7		X							
#8	X	X							
#9						X	X		X
#10	X						X		

Disadvantages

	Hedges (1964)	Jones & Ross (1964)	Bond & Smith (1966)	Epps (1966)	Boze (1967)	Strang (1968)	Wildman (1968)	PDE* (1971)	NEA (1975)
#11	X						X		
#12							X		
#13			X						
#14			X						
#15	X								
#16	X								
#17	X								
#18	X								
#19					X				

*PDE Bureau of Curriculum Development and Evaluation

Homework Surveys

A number of surveys have been conducted in an attempt to determine existing attitudes and current practices regarding homework.

In a 1966 survey, John F. Check of the University of Wisconsin at Oshkosh administered 1016 questionnaires to six different populations. His respondents were: 1) students of lower and upper elementary school, junior high school, and senior high school, 2) parents of the same four levels, 3) teachers of the four designated levels and professors from the University of Michigan, Flint College, and 4) education majors who were at that time electing educational psychology or educational sociology. Schools were from both public and parochial systems and from both a predominantly professional area and a more restricted cultural environment. There was almost 100% response.

Check summarizes the results of his study as follows:

(1) Elementary, junior, and senior high students generally feel that homework assignments are necessary. Only 20 per cent were generally against such assignments. However, almost one-half of them wanted to reserve the right to question the type of assignments given.

(2) Parochial school children are no different than public school children in regard to homework.

(3) The highest ratio of negative responses to homework came from children in the professional home. On the other hand, there was only one professional parent who was positively against such activities.

(4) Out of 205 parents responding, only seven of them rejected homework in any form. About one-half of them questioned the nature and amount of homework assignments that should be given.

(5) Of 90 teacher respondents, only one desired no homework at all. Half of them were concerned about the kind of assignments given.

(6) Professors at Flint College are strongly in favor of take-home assignments.

(7) Nearly 55 percent of education majors want homework. Another 38 per cent were in favor of these assignments but with conditions prescribed. (Check, 1966)

Also in 1966, Bond and Smith conducted a survey of elementary schools in 116 school districts in seven counties of the Hudson River Valley in New York State. Of the 116 school districts, 77 returned questionnaires. This represented a 66% response rate. Districts ranged in size from one with only a two-room rural elementary school of less than 50 children to a large city district with an elementary enrollment of over 4,000.

Bond and Smith's findings are summarized as follows:

(1) Of the 77 school districts responding only 27% had a written policy; 29% had no policy; 44% had an unwritten policy. "Almost three-fourths of the districts reporting had established no specific procedures."

(2) Figures from districts reporting having a policy indicate that "policy in regard to homework is being suggested by professional educators and not lay citizens."

Need for homework policy suggested by:	% of the districts having policies
administrators	44%
other supervisory personnel	10%
teachers	36%
board of education	3%
community citizens' committees	2%
parent groups	2%
unorganized groups or individuals	1%

(3) There tends to be a lack of communication regarding homework policy.

% of the districts having policies who:

distributed copies to teachers ----------54%
distributed copies to parents ----------22%
explained policies to parents each year ----------33%
made students aware of policy ----------14%
sent copy to local newspapers ---------- 2%

In 8% of the districts the policy was not systematically released to anyone.

(4) Most districts reporting a policy in operation tend to revise their policies about every three years.

(5) Subjects in which assignments of homework to children attending the schools represented in the study were most frequent are as follows:

Social Studies ----------75%
Mathematics ----------71%
Science ----------70%
Spelling ----------66%

(6) The most frequent type of homework given was as follows:

Type	% of districts reporting
Overnight assignment	50%
Weekly assignment	3%
Assignment of several days duration	21%
Assignment of more than a week's duration	25%
Combination of above patterns	1%

(7) Teachers in more than 50% of the districts are giving assignments in which every child in the class is given the same assignment.

(8) Generally, responses indicated that school districts were under increasing pressure by parents to give more, earlier, and longer homework assignments.

(9) Purposes reported for assigning homework were:

	% of districts reporting
Enrichment	43%
Development of research skills	43%
Check previous learnings	18%
Aid in pupil evaluation	8%
Drill	negligible
Inform parents	negligible

(10) In only one-third of the districts did teachers systematically correct, grade, and return homework to their pupils.

(11) In only 3% were teachers required to use the results of homework when determining report card grades.

(12) In schools which have established a formal homework policy, there is considerable disagreement about the level at which homework should commence. The starting level ranged from grade one to grade six, but formal homework for children begins by grade four in more than 90% of the districts reporting.

(13) There is considerable disagreement regarding the amount of time students should spend on homework. However, averages for all schools reporting were:

Grade	Minutes
1-2	20
3	25
4	30
5	40
6	50

In 1966, Kerzic surveyed 748 sixth, seventh, and eighth grade students in a small Southern California intermediate school. He also utilized data from a real estate agency in order to classify responses according to the socioeconomic area in which each student resided. Kerzic found that:

1. 69-80% of students felt that homework in English, social studies, math, and science helped them get better grades.

2. The amount of time spent on homework by students ranged from no time to three hours daily. The mean response was sixty-two minutes.

3. 91% of students reported that they needed at least some help with their homework assignments.

4. Over 75% of students reported that the following factors were detrimental to homework:
   a. Interruptions at home
   b. Uninteresting assignment
   c. Television

5. Over 75% of students reported that the following factors were beneficial to homework:
   a. A clear understanding of assignment
   b. Materials to do the job
   c. A quiet place to study

6. No differences were found among socioeconomic groups except that the per cent of students indicating that home interruptions were detrimental to their homework was 21% higher among students from the lowest socioeconomic area.

In 1967, Noel B. Cuff conducted an extensive retrospective survey, by checklist questionnaire, of the study habits, grades four to twelve, of students who showed high scholarship. It is not known, however, whether high scholarship was achieved by these students because of, coincidentally with or in spite of the study habits they reported.

They included, for students grades four to twelve:

(1) Formulating a clear conception of the task

(2) Having materials on hand

(3) Writing complete sentences

(4) Seeking to master material

(5) Taking notes after, not while, reading

(6) Interrupting work at a natural break in the material

(7) Grasping the meaning of charts and tables

(8) Working out concrete examples of rules and principles

(9) Using facts learned in one class to prepare for another

(10) Reading each topic until it is clearly understood.

Also reported by superior high school students were:

(1) Summarizing in one's own words

(2) Reading all instructions and questions before attempting to answer

(3) Making efficient, not aimless, use of the library

(4) Writing outlines of materials after reading them

(5) Making use of context clues

(6) Adjusting reading method to purpose

(7) Making critical judgements and opinions

The Institut de Sociologie de l'Université de Bruxelles and the Institut Superiur de Pedagogie de Morlanwelz, in the 1960's, undertook an experimental survey consisting of: (1) a comparison of pupils recorded time spent on each piece of their set of homework, the teacher's corresponding estimates of the usual time taken to do the work, and the official instructions; (2) a pupil questionnaire on attitudes, conditions, and organization concerning homework; and (3) an interview with students in the final year of their courses.

Students in the study were twelve to nineteen years old. Hotyat (1968) reports several conclusions drawn from this study which might be generalizable to this country:

(1) At all levels, the average total time pupils took to do work was higher than the teacher's estimates.

(2) The variation in the amount of time devoted by pupils within particular courses is great. The maximum time taken is well beyond twice the minimum time at all levels and in nearly all classes.

(3) Pupils who have not repeated a grade spend more time on homework than those who have repeated more than once.

(4) While the majority of pupils said that they immediately ask their teachers for an explanation when they do not understand something, most students who are in the bottom third of their class do not.

(5) As the burden of work increases, the extent to which pupils spend time on overlearning and revision decreases.

(6) The rate of rejection of school was 3% for pupils who had not repeated and over 13% for those who had repeated two successive years.

Savage describes a 1969 study conducted in New England which included responses from 2,692 children, 1,480 parents, 94 teachers, 90 principals, and 58 superintendents. Findings included the following:

(1) 86% of parents of intermediate age children favored regular nightly assignments of the "read-the-next-chapter-and-answer-the-questions-at-the-end" variety while 80% of educators supported long-range homework projects.

(2) Parents differ on their attitudes toward helping children with homework. Some welcome the responsibility and others do not.

(3) All parents urged moderation in the amount of homework.

(4) Given a list of thirteen possible reasons for homework's value for which respondents were to indicate whether each reason was seen valid, most parents (78%) agreed with most educators (88%) on the highest priority reason as "develops children's initiative and responsibility". They (67% or better of parents and 82% or better of educators) also agreed on the next three priority items, though ranked in slightly different order, as "provides necessary practice for skills learned at school", "develops research skills", and "creates opportunities for independent planning".

(5) Parents and educators also agreed on low ranking items. 65% of parents and 57% of educators see "extends the school day" as an invalid reason. 79% of parents and 90% of educators see "keeps children busy and off the streets at night" as invalid.

(6) There were some areas on which parents and educators opinions were moderately discrepant. For example, more parents saw "helps students do better on exams" as a valid reason while more educators saw "develops organizational skills" and "creates opportunities for children to become aware of local resources" as valid.

(7) Perhaps most importantly, the data indicates a broad range of opinions across the total school community regarding the value of homework on all items, even those for which there is relatively high agreement.

Leibert (1969) polled groups of high school sophomores, juniors, and seniors who were taking a reading improvement course at the University College of Syracuse University regarding homework. Most

pupils thought the purpose of homework was to review. Most of the pupils did not really study. The closest they came to studying was cramming for texts. It seems that they viewed homework only in terms of "completing assignments" and had difficulty knowing what studying is.

In 1971, the Bureau of Curriculum Development and Evaluation, Pennsylvania Department of Education sent a letter to ten selected state education departments in the nation asking, "Do you have a written philosophy or position paper on homework?" All responses were "no".

The Bureau sent the same letter to 465 chief school administrators in the Commonwealth of Pennsylvania; 416 or 89% replied. Of the 416 who replied, 260 or 62% said "no". The other 156 schools had a written policy or policies which they contributed for a total of 178 different homework policies. An analysis of the policies submitted was done to determine grade level, audience and theme. The results indicated that the overwhelming majority of homework policies were written to cover all of grades K-12, were very general, and were aimed at the teacher in providing guidelines to be used in making assignments. A graph illustrating the results of this survey is reproduced below.

PENNSYLVANIA PUBLIC SCHOOL HOMEWORK
POLICY SURVEY RESULTS

Criteria	K-12	K-6	7-12	Total
AUDIENCE:				
Student Oriented	1	0	4	5
Teacher Oriented	86	48	17	151
Parent Oriented	1	1	0	2
Combined	20	0	0	20
TOTAL	108	49	21	178

THEME:	K-12	K-6	7-12	Total
Time Oriented	18	12	3	33
Assignment Oriented	11	6	3	20
Combo. Time/Assign.	26	6	1	33
General Statement	53	25	14	62
TOTAL	108	49	21	178

Research Studies

In January 1969, the Elementary School Journal published a major review of homework research up to that time. In Goldstein's review (1960), seventeen experimental studies were cited. Of these, four produced findings that indicated a positive relationship between homework and achievement, four found no relationship, and nine yielded mixed results. Furthermore, Goldstein questioned more than half of these studies because of poor design and improperly drawn conclusions.

Research summaries by Epps (1966), Strand (1968), Austin (1976), and the PDE Bureau of Curriculum Development and Evaluation (1971) and the Encyclopedia of Educational Research refer to twelve additional experimental studies concerning homework done during the period 1900-1959 that did not appear in Goldstein's review. Findings of these twelve studies are summarized in the chart below. *

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* For a summary of the seventeen pre-1960 studies reviewed by Goldstein, see R.C. Harding, "The Relationship of Teacher Attitudes Toward Homework and the Achivement of Primary Grades Students". Unpublished doctoral dissertation, Lehigh University, 1979.

SUMMARY OF RESEARCH

GRADE/S	SUBJECT/S	FINDINGS	RESEARCHER
High school	Science	Definite assignments result in superior achievement.	Beauchamp (1923)
Not given	Mathemtics	Students given identical assignments do not do as well as students given tailored assignments.	Schunert (1951)
Elementary followed through to high school	All	A drop in high school grades among those pupils who attended the El Segundo Elementary School after homework was abolished.	El Segundo School District (1937)
Seven	Arithmetic, Grammar	Regular homework led to gains in achievement.	Steiner (1934)
High school	English, Social Studies Mathematics	Group with homework showed higher gains than group with no homework.	Anderson (1946)
High school	American History	Bright students did slightly better with homework. Average and slow students did much better with homework.	Schain (1954)
High school	Plane Geometry	Test scores favored the homework group over the non-homework group	Hines (1957)
Seven to twelve	Not given	Free comments (on homework papers) group achieved significantly higher than no comments group	Page (1958)
Not given	Not given	Low correlation between study habits scores and school marks	Brown and Holtzman (1955)

The findings of this group of studies would tend to add greater support to the positive relationship between homework and achievement. They also suggested a possible relationship between the kind of homework assignment given and achievement and between the kind of feedback given and achievement. However, it can still be said that by 1960 the issue of homework versus no homework, which had been the focal point of most homework research to that date, remained unresolved.

During the 1960's and 1970's, however, the interest in homework research was renewed and the rate at which new studies were generated more than doubled (Harding, 1979)

More studies dealt with the question of the kind or types of homework assigned and how they related to achievement.

In 1978, Harding (1979) reviewed twenty of these studies along with Goldstein's 1900-59 review and one additional study by Courtis on spelling. He concluded that "There are still no clear cut answers to the question of how effective homework is in academic achievement."

Harding's own study (1979) on "The Relationship of Teacher Attitudes Toward Homework and the Achievement of Primary Grades Students" and five additional post-1959 studies not reviewed by Harding are reviewed below.

Hudson, in a 1965 pilot study of the influence of homework in seventh grade mathematics and attitude toward mathematics in the Fayetteville, Arkansas Public Schools, reported that achievement in arithmetic computation, but not arithmetic concepts, was influenced by the amount of homework assigned. (Strang, 1968)

In 1966, Beaumont conducted a study at Indiana University of Pennsylvania. He found no significant difference in achievement with homework and non-homework groups of students taking business mathematics. He also experimented with the assignment of different varieties of homework and found no significant difference in achievement.

Maertens (1968) studied the differential effects of assigned homework in arithmetic upon the attitudes of third grade pupils toward school, teacher, arithmetic, spelling, reading, and homework. 342 students from the Osseo, Minnesota Public Schools were randomly assigned to third grade classrooms. Assignment to ability groups was made within each classroom. Students were grouped according to categories of high, middle, and low I.Q. as measured on the Lorge-Thorndike. There were three treatment groups used: (1) One group was given homework carefully prepared by the experimenter to further the objectives of the unit under study. (2) Another group was given homework as the classroom teacher desired. (3) The third group was allowed to do no homework.

There were three treatment periods so that each group received each treatment. Following each treatment period, attitudes were measured through administration of an experimenter-prepared attitude scale. Analysis of results produced no statistically significant difference among treatments. Maertens concluded that "the administration of arithmetic homework does not affect pupil's attitudes toward school, teacher, homework, spelling, arithmetic, or reading.

In 1974, Schoen and Kreye conducted a study involving prospective elementary teachers in two large classes of a college mathematics concept course. The prospective teachers were randomly divided into several groups. Comparison made between two homework grading strategies, free teacher comments and no teacher comments, after three months, revealed that no differences were found on test achievement. (Austin, 1976)

Austin (1976) investigated the effect of teacher's written comments on mathematics homework papers. Nine classes of elementary and secondary pupils were involved in the experiment for six weeks. 222 pupils were divided into comment and no-comment groups. Results indicated a positive relationship between homework and student achievement in some math classes and not others.

Harding (1979) investigated the relationship between teacher attitudes concerning homework and the mathematics and reading achievement levels of primary age children. The sample student population consisted of 1,112 fourth grade students in the Souderton Area School District. Those selected for the study were those who had attended, without interruption, the first through third grades there. Achievement was assessed through standardized test scores recorded in student's cumulative records. Teacher attitude was assessed through scheduled personal interviews plus the completion of a questionnaire. The purpose of the questionnaire was to clarify, confirm, and quantify the data generated by the interview. A Likert type scale was used to assess the strength of teacher attitudes toward homework and a scale of 0-4 the frequency in assigning various forms of homework: written, oral, reading, television, and parental involvement.

Beyond this, the study dealt with questions of how teachers use available instructional time, whether teachers assign homework-type activities during the day, how much time is spent on independent activities during the day, how much time is spent in direct teaching of students, what relationship a teacher's attitude regarding homework has with the achievement of high and low ability students, whether teaching patterns are related to teachers' attitudes regarding homework, whether teachers who believe strongly in homework tend to use homework as an extension of their instruction, and whether non-proponents of homework utilize in-school instructional time for assignments.

The results of this study indicated that homework had minimal impact on student academic performance. Homework of the types covered by the study was not significantly related to the reading and mathematics scores of primary grade children. Nor did it have much impact on students' report card grades.

Further, the study found that the amount of time children spent on independent work tasks during the school day varied greatly and ranged from 9-66%.

It was noted that homework was given primarily as practice or drill and that none of the teachers in the study assigned homework as punishment.

Portions of a chart prepared by Harding (1979) in which he summarized the findings of twenty post-1959 studies he had reviewed is reproduced on the next page with the addition of the five additional studies reviewed above.

Considering information reviewed on all of the research 1900 to present, this writer would have to agree with Harding that the question of the relationship of homework to achievement remains unresolved.

SUMMARY OF RESEARCH

GRADE	SUBJECT	FINDINGS	RESEARCHER
Six	Mathematics	Students with homework did significantly better in computation and problem solving.	Koch (1965)
Seven	Mathematics	Achievement in arithmetic computation was related to amount of homework. Achievement in arithmetic concepts was not.	Hudson (1965)
University	Business Mathematics	No significant difference in achievement between homework and non-homework groups.	Beaumont (1966)
Ten	Geometry	No significant difference in achievement between students who had all assignments corrected and those who had assignments spot checked.	Small (1967)
Four, five, & six	Spelling, language, arithmetic social studies, science, reading	Students receiving individualized enrichment homework showed greater achievement than those who did not.	Singh (1970)
Three	Mathematics	No significant difference between homework and no homework groups for achievement or in attitudes toward mathematics.	Maertens (1968 & 1969)
Six	Mathematics	Regularly assigned homework serves no positive advantage for highly anxious elementary school children.	Allison & Gray (1971)

SUMMARY OF RESEARCH

GRADE	SUBJECT	FINDINGS	RESEARCHER
Six	Mathematics	Drill homework may be unrelated to growth in computational skills.	Gray & Allison (1971)
Four, five, & six	Mathematics	Homework groups did significantly better than no homework groups except for fifth grade problem solving.	Maertens & Johnson (1972)
High school	Algebra, Geometry	Homework could not be justified solely on the basis of achievement and attitude. It could be justified on the basis of student and parent preference for it.	Taylor (1972)
Four	Mathematics	Students who received reinforcement type homework achieved better.	Doane (1972)
Elementary	Social studies, mathematics, & spelling	When students assigned homework relatively few complete the assignment and classroom performance slightly affected. Students with spelling homework did better.	Harris (1972)
-----	Teacher classroom behavior	Negative correlation between achievement and independent work. Positive and significant correlation between supervised seatwork and achievement.	Soar (1973) Stallings & Kaskowitz (1974)

SUMMARY OF RESEARCH

GRADE	SUBJECT	FINDINGS	RESEARCHER
College	Mathematics	No significant difference in achievement between free teacher comment (on homework papers) and no teacher comment groups.	Schoen & Kreye (1974)
Junior High	Algebra	Students who received explanatory and review homework achieved higher and retained longer than students not getting similar homework.	Friesen (1975)
Elementary & secondary	Mathematics	A positive relationship between homework and student achievement in some math classes and not others.	Austin (1976)
Seven & eight	Mathematics	No difference between groups who had all problems corrected and those who had a random sample.	Austin & Austin (1974)
High school	Shorthand	Use of reading goals to encourage high speed reading of shorthand was more effective in increasing dictation speed than were traditional assignments of reading and writing assignments at least once.	Perry (1974)
Nine	Mathematics	Significant changes in achievement were promoted by homework.	Parrish (1976)

SUMMARY OF RESEARCH

GRADE	SUBJECT	FINDINGS	RESEARCHER
Junior High	Algebra	No significant difference in achievement between exploratory assignments and standard textbook assignments.	Dadus (1976)
Early elementary	Basic skills	Direct teaching is significantly related to achievement.	Brophy & Everson (1976)
Primary	Mathematics & reading	Homework not significantly related to achievement.	Harding (1979)

Homework Policies

Despite the inconclusive nature of the body of research available, schools will continue to be faced with the question of homework. One way a school or district might reasonably cope with the issue is to develop a homework policy, and, in the last fourteen years, there have appeared a number of articles providing information on how one might best go about this.

Hedges (1964) makes some rather direct suggestions in the areas of (1) what parents have a right to expect from teachers, (2) what teachers have a right to expect from parents, (3) six characteristics of good homework assignments, (4) several characteristics of the policy itself, (5) and time schedules for various grade levels. He stresses the leadership role of the building principal in establishing a homework policy for his school as well as the needed role of teachers and parents in agreeing on purpose, type, amount, and timing of homework.

William D. Hedges is the Director, Division of Educational Research, University of Virginia, Charlottesville.

Ferguson (1966) suggests development of a homework policy that is permissive enough to allow for individual differences in students, i.e., "an individualized homework policy". She gives a simple, straightforward example of a policy developed in Waco, Texas and additional suggestions on how to support implementation of a homework policy.

Ruth W. Ferguson is Elementary Education Coordinator, Waco Public School, Texas.

Epps (1966) discusses establishing a homework policy and suggests that in a cycle every several years schools (1) plan, (2) implement, (3) publicize, (4) reevaluate, and (5) revise homework policies. Information is given on aspects unique to elementary, junior high, or senior high homework policies and the roles of the teachers, the parents, and the students are explored.

Margaret Epps is Research Assistant for the Research Divison, National Education Association and was responsible for preparation of Research Summary 1966-S2: Homework by the division.

The National School Public Relation Association (NSPRA) approaches the question of homework from a public relations viewpoint. In it's September 1966 public relations newsletter for classroom teachers, It Starts in the Classroom, NSPRA suggests that teachers examine their own homework approaches and practices yearly. They suggest twelve criteria related to "good homework" and give some examples of good homework. NSPRA provides suggestions on how "you can reduce homework gripes" and "avoid booby-traps".

NSPRA is a department of the National Education Association.

Strang (1968) relates experimental research and good practice to a set of eight recommendations for making modifications in homework

policies. Included are:

(1) Development of study skills in the elementary school.

(2) Provision of time for other activities.

(3) More time for guided study in school.

(4) Long-term projects.

(5) Less written homework.

(6) More student initiative and freedom.

(7) More meaningful and useful study.

(8) Individualized homework.

Ruth Strang elaborates on the above recommendations in her report "Guided Study and Homework" published as Report #8 of What Research Says to the Teacher by the Association of Classroom Teachers, National Education Association (NEA).

Savage (1969) points out that there is basic disagreement among parents and educators over the best kind of homework supported by his own survey in 58 New England school districts and previous research. He suggests that closing the communication gap is essential and that school board must reach agreement on what homework is supposed to accomplish. "Parents", he says, "need to know that there are different kinds of homework assignments, that each has a different purpose, that their own roles in helping their children should vary accordingly."

John F. Savage is Assistant Professor, School of Education, Boston College, Chestnuthill, Massachusetts.

A committee of parents, teachers, and school administrators in

Pottstown School District, Pottstown, Pennsylvania (1970) developed a home study policy. In it they define home study; state their philosophy and objectives regarding homework; describe the respective roles of students, parents, and teachers; and describe the kinds of homework and the amount of time to be spent on homework appropriate to each level, i.e., primary (1-3), intermediate (4-6), junior high school (7-9), and senior high school (10-12).

The committee states that the policy should be implemented with flexibility and should be modified from time to time as needed.

The Bureau of Curriculum Development and Evaluation, PDE (1971) conducted a study on homework in which they reviewed related literature and conducted both a national and a commonwealth survey concerning homework policies as cited in the "Surveys" section of this paper.

The Bureau goes on to recommend that school districts who believe in homework develop a written policy and provides suggestions for creating a meaningful homework policy.

Suggestions include information on how to initiate a homework policy, what should and should not be included in its contents, and a suggested teacher checklist for evaluating the quality of homework assignments.

The National Education Association in it's 1975 report on homework repeats the recommendations on policy changes made by Strang in her 1968 report and cited above.

Finally, Geller (1977) published a set of eleven guidelines developed by teachers and principals and reviewed by a community advisory council in his district.

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DISCUSSION

It appears that since the turn of the century homework has been periodically in and out of favor.

Educators have not agreed upon a common definition of homework. Though many "kinds" of homework are mentioned in the literature, we lack any universally accepted taxonomy, constructs, or classifications of homework which would make discussion more meaningful.

There are many proponents and many opponents of homework. Opinions regarding the advantages of homework are as prevalent as opinions regarding the disadvantages.

The results of surveys on homework practices are spotty because each one asks a different set of questions.

Sixty years of empirical research on the relationship of homework to achievement is inconclusive.

Despite an inability to empirically support homework practices, state and national educational organizations advise us to develop written local policies regarding homework.

Where do we begin?

It is the opinion of this writer, that we may be spending our energies on trying to answer one or two questions that are so broad and that encompass a set of factors so complex as to make the questions unanswerable. We might better spend our energies on answering a lot of smaller and more immediately relevant questions.

It would seem that some ground lies between the rigors of empirical research done for the purpose of trying to create a

generalizable body of information on the one extreme and simply ignoring the inadequacies of available research and developing local policies based on nothing more than opinion and popularized notions on the other.

It is the opinion of this writer that the proper place for meaningful homework research is within the school and the local district. If local communities value homework, they need to explore why. They need to clarify their purposes for homework. But this alone is not enough.

Assumptions made at the local level about the value of homework should be tested at the local level. In other words, it makes sense that each school or district would research whether homework as they define and construct it actually results in meeting the purposes for which it is designed. Furthermore, homework practices should be studied to determine if they contribute to meeting stated school and district goals of education.

Very simply, school districts need to design their own research studies to find answers to the questions of (1) whether homework helps them to meet their priority goals of education, (2) if it effectively accomplishes what was intended in their stated purposes for homework, and (3) if anything else they can reasonably do meets these purposes better.

Local homework policies should be developed and modified on a sound base of local research.

Cynthia L. McKeever Knorr

 July 1980

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